

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

A 1. (original) A telephone call restriction apparatus for connection to a telephone line, comprising:

a controller having memory for storing call restriction data and at least one call restriction rule; and

50 a transceiver having conductors for receiving tone signals from and sending tone signals to the telephone line and conductors for sending digital signals to and receiving digital signals from said controller;

wherein said controller is programmed to detect that a call inhibition condition exists based on digital signals received from said transceiver, said call restriction data and said call restriction rule, and to cause an interference on said telephone line in response to detection of a call inhibition condition. 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000

2. (original) The apparatus as recited in claim 1, wherein said transceiver sends a tone signal to the telephone line in response to said controller detecting that a call inhibition condition exists.

3. (original) The apparatus as recited in claim 2, further comprising a circuit that increases the intensity of said tone signal on said the telephone line in response to said controller detecting that a call inhibition condition exists.

4. (original) The apparatus as recited in claim 1, wherein said transceiver comprises a DTMF transceiver.

5. (original) The apparatus as recited in claim 1, wherein said memory is nonvolatile.

6. (original) The apparatus as recited in claim 1, further comprising a circuit for supplying power to said controller and to said transceiver only when a telephone off hook condition is detected on the telephone line.

7. (original) The apparatus as recited in claim 1, further comprising a circuit for maintaining the interference on said telephone line until a telephone on hook condition of sufficient duration is detected.

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8. (currently amended) The apparatus as recited in claim 1, wherein the controller ceases the interference in response to detection of an on-hook condition inhibition and further, wherein comprising a circuit for resuming resumes the interference on said telephone line following a telephone off on hook condition of insufficient duration.

9. (original) The apparatus as recited in claim 1, wherein said controller comprises a microcontroller chip.

10. (original) The apparatus as recited in claim 1, wherein said controller is further programmed to change its mode of operation from a call restriction mode to a programming mode in which said controller is programmable in response to receipt of digital signals representing a predetermined authorization code from said transceiver, said steps of detecting a call inhibition condition and causing an interference on said telephone line being performed in said call restriction mode.

11. (original) The apparatus as recited in claim 10, wherein said controller is further programmed, when in said programming mode, to receive call restriction data from said transceiver and writing said call restriction data into said memory.

12. (original) A method for programming a call restriction device connected to a telephone line, comprising the following steps:

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establishing a connection between a telephone and a remote computer via the telephone line;

placing the call restriction device in a mode wherein the call restriction device is programmable;

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sending signals representing call restriction data from the telephone onto the telephone line;

sending signals representing said call restriction data from the remote computer onto the telephone line; and

A storing said call restriction data in the call restriction device so that the call restriction device, when in a call inhibition mode, will restrict calls on the telephone line in accordance with said stored call restriction data.

13. (original) The method as recited in claim 12, further comprising the step of sending signals representing an authorization code from the telephone onto the telephone line prior to sending said signals representing call restriction data.

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14. (original) The method as recited in claim 12, further comprising the step of sending a voice prompt from the remote computer onto the telephone line, said voice prompt requesting input of call restriction data.

15. (original) The method as recited in claim 13, further comprising the step of sending a voice prompt from the remote computer onto telephone line, said voice prompt requesting input of said authorization code.

16. (original) A system comprising:

a telephone line;

a call restriction device connected to said telephone line and programmed to restrict calls on said telephone line in a call inhibition mode and to accept call restriction data in a programming mode;

a telephone connected to said telephone line; and

an interactive voice response system having an access number that is accessible via a public telephone switching network, wherein said interactive voice response system is programmed to perform the following steps:

sending a voice message requesting input of call restriction data while connected to said telephone line;

recognizing signals representing call restriction data returned via said telephone line following sending of said voice message requesting input of call restriction data; and

A sending signals representing said call restriction data while connected to said telephone line.

17. (original) The system as recited in claim 16, wherein said interactive voice response system is further programmed to perform the following steps:

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B1 sending a voice message requesting input of an authorization code while connected to said telephone line;

recognizing signals representing an authorization code returned via said telephone line following sending of said voice message requesting input of an authorization code; and

sending signals representing said authorization code while connected to said telephone line,

wherein said voice message requesting input of call restriction data is sent by said interactive voice response system only after detection of a predetermined signal indicating said authorization code is valid transmitted by said call restriction device.

18. (original) The system as recited in claim 17, wherein said call restriction device is programmed to perform the following steps:

validating said authorization code sent by said interactive voice response system; and

changing modes from a call inhibition mode to a programming mode and sending said predetermined signal to said telephone line after validation of said authorization code.

19. (currently amended) A method for programming a call restriction device connected to a telephone line, comprising the following steps:

establishing a connection between a computer and a destination station via the telephone line;

placing the call restriction device in a mode wherein the call restriction device is programmable;

inputting call restriction data into the computer;

sending signals representing the inputted call restriction data from the computer onto the telephone line;

~~sending signals representing said call restriction data from the remote computer onto the telephone line; and~~

storing said call restriction data in the call restriction device so that the call restriction device will operate in said call inhibition mode in accordance with said stored call restriction data.

20. (original) A telephone call restriction apparatus for connection to a telephone line, comprising:

memory for storing call restriction data in digital format and at least one call restriction rule;

a digital processor programmed to apply said call restriction rule to said call restriction data; and

a converter for converting tone signals on the telephone line into digital signals and converting digital signals from the digital processor into tone signals;

wherein said digital processor is further programmed to detect that a dialed telephone number belongs to a category of restricted telephone numbers and then restrict a call to a destination identified by said dialed telephone number in accordance with said call

~~restriction data.~~

21. (amended) A telephone call restriction system comprising:

a telephone line;

a telephone connected to said telephone line;

a call restrictor connected to said telephone line; and

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a remote computer communicative with said telephone and said call restrictor via said telephone line when a connection is established, said computer being programmed to automatically program said call restrictor based on call restrictions input via said telephone.

22. (amended) The system as recited in claim 21, wherein said remote computer is an interactive voice response system.

23. (original) The system as recited in claim 21, wherein said call restrictor comprises:

a controller programmed to transmit first and second control signals in response to detection of a call inhibition condition;

a DTMF transceiver having a port for outputting DTMF signals in response to receipt of said first control signal from said controller; and

a circuit that increases the amplitude of the DTMF signals output from said port of said DTMF transceiver signals in response to receipt of said second control signal from said controller.

24. (original) A method for preventing a telephone call to a restricted destination station, comprising the steps of:

monitoring a telephone line connected to a telephone;

detecting that a telephone number dialed on the telephone is restricted; and

generating a high-intensity DTMF signal on the telephone line in response to said detecting step, said high-intensity DTMF signal having sufficient intensity to interfere with a telephone call on the telephone line.

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25. (original) A telephone call restrictor programmed with call restrictions and having a programming mode and a call restriction mode, comprising:

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a controller that is programmable in said programming mode and that detects call inhibition conditions as a function of said call restrictions in said call restriction mode;

a DTMF transceiver having a port for outputting DTMF signals in both said programming mode and said call inhibition mode; and

a circuit that increases the amplitude of the DTMF signals output from said port of said DTMF transceiver signals, said circuit being active when said controller has detected a call inhibition condition and being inactive at other times.